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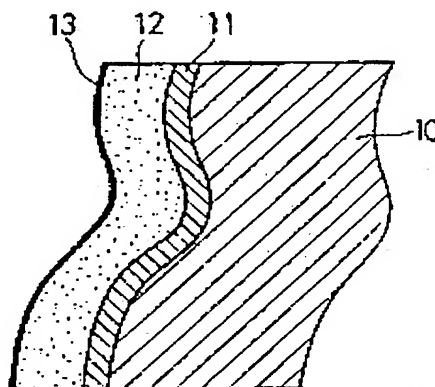
54) COATING METHOD FOR METALLIC MOLD FOR CASTING LOW MELTING METAL

(57)Abstract:

PURPOSE: To form a coating layer having excellent adhesiveness and thermal impact resistance by thermally spraying a metallic material having good adhesiveness to ceramics to the inside surface of a metallic mold and thermally spraying ceramics thereto, then coating a sealing material on the surface thereof.

CONSTITUTION: A power material such as Ni-Cr alloy is thermally sprayed to the inside surface of the metallic mold 10 for casting an Al alloy, etc. to form a thermally sprayed metallic film 11 to about 100W2,000 μ m thickness. The ceramic material of whisker Al₂O₃-TiO₂, etc. is then thermally sprayed thereon to form a thermally sprayed ceramic film 12 to about 100W200 μ m thickness. The sealing material such as power of a ZrO₂-SiO₂ compd. is then coated thereon to form a sealed layer 13 to about 10 μ m thickness.

The thermally sprayed film 11 improves the adhesiveness between the thermally sprayed ceramic film 12 and the metallic mold 10 and improves the thermal impact resistance thereof. The thermally sprayed ceramic film 12 improves the heat insulating characteristic and improves solidifying conditions. The sealed layer 13 contributes to an improvement of a release characteristic.



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